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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KIM, AHSHIK

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/880,899

Applicant(s)

BARKAN ET AL.

Examin r

Ahshik Kim

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/04/03 (Amendment) .
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-31 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) g .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____ .

DETAILED ACTION

Amendment

1. Receipt is acknowledged of the amendment filed on March 4, 2003. In the amendment,
5 claims 1, 2, 13, 14, and 21-23 are amended. Claims 1-31 remain for examination.

Claim Objections

2. Claim 11 is objected to because of the following informalities:

Re claim 11, it appears that the claim should have been written "The apparatus of claim 1
10".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
15 obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
20

3. Claims 1-9 and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Katz (US 5,814,827).

25 Katz teaches an optical code reader comprising a first, second, and third solid-state photo sensor array 68,70,72 (see figures 1 and 2). These sensor arrays would detect parts of a code, the circuitry within the reader combining and comparing to form electrical signals for decoding.

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Column 2, 4th paragraph discusses that it is well known in the art for scanners to have circuitry that electrical analog to digital conversion means. The detectors may lie on the same semiconductor die 92, or may be on separate dies (col. 5, lines 60-63). There is space on the die to support circuitry for the arrays and other components of the reader (col. 6, lines 17-20). Lens 5 96, 98, and 100 (formed as a packaged plate) are spaced in front of the sensor arrays, within 10 mm.

However, it is not specified that the sensor arrays be arranged at angles with respect to one another.

The art of Katz teaches that the sensor arrays may be of different positions planes, 10 whereas signals from each of the arrays would be used to handle the decoding of a scanned code. It would have been obvious to one of ordinary skill in the art to fashion the arrays in at angle in respect to each other, 60 degrees to each other, or in an triangle fashion, so as to provide a configuration best suited for the particular code reader to gather an optimal amount of light reflected from the code.

15 4. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz, in view of Feng (US 5,920,061).

The teachings of Katz have been discussed above. However, Katz fails to teach an aiming beam for providing a reference spot on the code to be read, the beam produced from at least two 20 LEDs and associated lens.

Feng teaches an optical reader, in which two LEDs (63B and 64B) produce an aiming beam for providing a reference cross hair spot on a code (see figures 1, 2, and 9). In front of the LEDs are focusing lens 722 and 724.

It would have been obvious to one of ordinary skill in the art to employ an aiming beam with an optical reader, as it is well used in the industry to provide a visual means of finding a bar code and correctly positioning the reader, so as to accurately read and decode that code.

Regarding claim 11, Feng shows that the aiming LEDs are produced and formed on the same die or board 54. This would have also been obvious to one of ordinary skill, as such a design allows the components within the reader to take up less space, thus reducing the cost to manufacture the reader.

5. Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (US 5,814,827) in view of Feng (US 5,920,061) and Meyerson et al. (US 5,818,028). The teachings of Katz as modified by Feng have been discussed above.

However, the art fails to teach the specifics of the housing of the reader, the reader having a gun-shaped housing with a head and handle portion and a circuit board extending within the reader from the head of the reader through the length of the handle.

15 Meyerson teaches an optical reader comprising: a gun shaped housing comprising a headportion containing a sensor assembly and a handle portion sloping backwardly and downwardly from the head portion, said handle carrying a trigger 21; and a circuit board 20 extending from the head through entire length of the handle portion. The board carries an interface connector 28 at a lower end of the handle. Portion 19 of the circuit board contains the
20 imaging assembly of the reader.

It would have been obvious to one of ordinary skill in the art to provide the housing design of Meyerson to the reader components of Katz as modified by Feng. Such a design is well known in the art and accepted in many retail and technological establishments. The gun-

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shape is notoriously common in the industry. Having the circuit board extend throughout the head and handle portion allows all the components to be easily replaceable during service. There would be no need to detach particular portions of the reader for service; just an operation of removing the circuit board for easy maintenance.

5 Regarding claims 29 and 30, the art of Katz teaches that visual and audible indicators are common on the housing of code readers (col. 2, lines 50-55). Thus this measure would have been obvious to one of ordinary skill in the art to add to the optical reader.

Response to Arguments

10

6. Applicant's amendments and arguments filed on March 4, 2003, have been fully considered, but they are not persuasive.

Applicant appreciates Applicant's amending claims, which further limits and clarifies the claimed invention. However, for the reasons stated below, it is the Examiner's view that the

15 Katz patent still reads on claimed invention disclosed in instant application.

As discussed in paragraph 3 above, Katz discloses an apparatus for an optical code reader comprising three photo-sensor arrays 68, 70 and 72. The detectors are installed on a chip/PCB 92. Relying on figure 11 of Katz, if one draws a straight line from each photo-sensor arrays to the center point of the target 270, the three lines/axes would meet at the target. The three axes
20 or lines would create intersecting angles of less than 90 degrees. Observing the chip 92 containing three detectors (figure 5), if one draws an imaginary line through the middle one 70, that would create an axis for the photo-sensor array 70. Accordingly, there exist an infinite

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number of axes going through each one of the detectors. Obviously, there are many axes for the detectors that intersect at any angle between 0 and 360 degrees.

Relying on the figures 8(c), and 9(a)- (9d) of the instant application, the Examiner respectfully suggest the Applicant to use "plane" or "planar relationship" (instead of axis) in describing arrangement of the three photo-sensor arrays. For example, it is the Examiner's opinion that phrase such as "planes extending from three respective planes on which the photo sensor arrays were installed intersect at an acute angle" may obviate the points raised above.

The amended claims and remarks describing these elements have been fully considered, but in view of the above, they are not persuasive. Therefore, the Examiner has made this Office Action final.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Ahshik Kim* whose telephone number is (703)305-5203 . The examiner can normally be reached between the hours of 6:00AM to 3:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (703) 305-3503. The fax number directly to the Examiner is (703) 746-4782. The fax phone number for this Group is (703)308-7722, (703)308-7724, or (703)308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [ahshik.kim@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Ahshik Kim
Patent Examiner
Art Unit 2876
May 15, 2003


MICHAEL G. LEE
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